

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the Application. No new matter has been introduced by way of the claim amendments. Current additions to the claims are noted with underlined text. Current deletions from the claims are indicated by text ~~striketrough~~ or ~~[[double bracketing]]~~. The status of each claim is indicated in parenthetical expression following the claim number.

1 – 40 (Cancelled)

41. (Currently Amended) A composite material, comprising:

- a) carbon nanotubes;
- b) a fiber reinforcement material; and
- c) a polymer;

wherein the carbon nanotubes ~~are covalently chemically~~ bound to both ~~bind~~ the fiber reinforcement material ~~and with~~ the polymer; ~~[[.]]~~

wherein the carbon nanotubes comprise a bridge between the fiber reinforcement material and the polymer.

42. (Previously Amended) The composite material of claim 41, wherein the carbon nanotubes are silane-functionalized.

43. (Previously Amended) The composite material of claim 41, wherein the carbon nanotubes are single-wall carbon nanotubes.

44. (Original) The composite material of claim 41, wherein the fiber reinforcement material is silane-functionalized.

45. (Previously Amended) The composite material of claim 41, wherein the fiber reinforcement material comprises glass fibers.

46. (Previously Amended) The composite material of claim 45, wherein the glass fibers have been resized with an organosilane species.

47. (Previously Amended) The composite material of claim 41, wherein the polymer is an epoxy.
48. (Previously Amended) The composite material of claim 45, wherein the glass fibers are in a form of woven sheets.
49. (Previously Amended) The composite material of claim 48, wherein the woven sheets are stacked together with the carbon nanotubes and the polymer between them;
wherein the carbon nanotubes are silane-functionalized.
50. (Withdrawn—Currently Amended) A method comprising:
a) providing a quantity of a fiber reinforcement material;
b) adding carbon nanotubes to the fiber reinforcement material to form carbon nanotube-coated fibers; and
c) contacting a polymer material with the carbon nanotube-coated fibers to form a composite material;
wherein the carbon nanotubes ~~are covalently~~chemically bound to both~~bind~~
the fiber reinforcement material and~~with~~ the polymer material;[[.]]
wherein the carbon nanotubes comprise a bridge between the fiber reinforcement material and the polymer material.
51. (Withdrawn—Previously Amended) The method of claim 50, wherein the fiber reinforcement material comprises glass fibers.
52. (Withdrawn—Currently Amended) The method of claim 50, wherein the carbon nanotubes are selected from the group consisting of single-wall carbon nanotubes, multi-wall carbon nanotubes, double-wall carbon nanotubes, and combinations thereof.
53. (Withdrawn—Previously Amended) The method of claim 50, wherein the carbon nanotubes are single-wall carbon nanotubes.
54. (Withdrawn—Previously Amended) The method of claim 50, wherein the carbon nanotubes are silane-functionalized.

55. (Withdrawn—Previously Amended) The method of claim 51, wherein the glass fibers are resized with an organosilane species.
56. (Withdrawn—Previously Amended) The method of claim 50, wherein adding carbon nanotubes to the fiber reinforcement material comprises an incipient wetting process, said incipient wetting process comprising:
- a) dispersing the carbon nanotubes and the fiber reinforcement material in a solvent to form a mixture; and
 - b) removing the solvent to form the carbon nanotube-coated fibers.
57. (Withdrawn—Previously Amended) The method of claim 56, wherein the carbon nanotubes are functionalized.
58. (Withdrawn—Currently Amended) The method of claim 50, wherein the carbon nanotubes are covalently~~chemically~~ bound to the fiber reinforcement material through functional groups originating on either of the carbon nanotubes and the fiber reinforcement material.
59. (Withdrawn—Currently Amended) The method of claim 50, wherein the carbon nanotubes are covalently~~chemically~~ bound to the fiber reinforcement material through functional groups originating on both the carbon nanotubes and the fiber reinforcement material.
60. (Withdrawn—Original) The method of claim 50, wherein the polymer material is selected from the group consisting of thermosets, thermoplastics, and combinations thereof.
61. (Withdrawn—Previously Amended) The method of claim 50, wherein the polymer material is selected from the group consisting of epoxies, vinylesters, polyester, bismaleimide, polystyrene, polybutadiene, polyisoprene and combinations thereof.
62. (Withdrawn—Original) The method of claim 50, wherein the polymer material comprises at least one polymer precursor.

63. (Withdrawn—Previously Amended) The method of claim 62, further comprising a step of polymerizing the at least one polymer precursor.
64. (Withdrawn—Previously Amended) The method of claim 62, further comprising a step of curing the at least one polymer precursor.
65. (Withdrawn—Previously Amended) The method of claim 50, wherein the fiber reinforcement material is sized with the carbon nanotubes.
66. (Withdrawn—Currently Amended) The method of claim 58, wherein either of the carbon nanotubes and the fiber reinforcement material are covalently~~chemically~~ bound to the polymer material.
67. (Withdrawn—Currently Amended) The method of claim 58, wherein both the carbon nanotubes and the fiber reinforcement material are covalently~~chemically~~ bound to the polymer material.
68. (Previously Amended) The composite material of claim 41, wherein the carbon nanotubes are hydroxyl-functionalized carbon nanotubes that have been further silane functionalized;
wherein the hydroxyl-functionalized carbon nanotubes are prepared by reacting fluorinated carbon nanotubes with a reagent selected from the group consisting of a mono-metal salt of a dialcohol, a mono-metal salt of a multi-alcohol, and an amino alcohol.
69. (Previously Amended) The composite material of claim 68, wherein the hydroxyl-functionalized carbon nanotubes are further silane functionalized with a silation reagent selected from the group consisting of a silanol and a chlorosilane.
70. (Cancelled)

71. (Withdrawn—Previously Amended) The method of claim 50, wherein the carbon nanotubes are hydroxyl-functionalized carbon nanotubes that have been further silane functionalized;
- wherein the hydroxyl-functionalized carbon nanotubes are prepared by reacting fluorinated carbon nanotubes with a reagent selected from the group consisting of a mono-metal salt of a dialcohol, a mono-metal salt of a multi-alcohol, and an amino alcohol.
72. (Withdrawn—Previously Amended) The method of claim 71, wherein the hydroxyl-functionalized carbon nanotubes are further silane functionalized with a silation reagent selected from the group consisting of a silanol and a chlorosilane.
73. (Cancelled)